AI and Future of Work

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Developments in Artificial Intelligence (AI) are setting the stage for a paradigm shift in the workplace. According to PwC, 72% of business executives say that AI will give them a competitive advantage in the future [1]. In fact, in many ways the future is already here. Several repetitive and simple tasks that were typically performed by humans are now being automated by AI bundled with other technologies, such as cloud systems, augmented reality, (social) robots, IoTs, and wearables. Consequently, the ratio of tasks executed by machines to humans is dramatically shifting. For instance, in 2018 an average of 71% of total task hours were performed by humans compared to 29% accomplished by machines. However, this average is expected to shift dramatically in the near future with 58% of tasks hours expected to be performed by humans and the remaining 42% to be handled exclusively by machines by 2022 [2].

In a world of such rapid technological changes, it is paramount to have an overview of the research being conducted in this discipline. Such an understanding of current developments of AI and associated technologies enables us to envision the future workplace and its effect on human employees. These insights also provide guidance to employees, teams, organizations, and governments in creating a sustainable and synergistic workplace. Finally, engaging in this research allows us to proactively counter any negative effects that may arise from the changes in the work settings. This minitrack is a platform where AI researchers working on the context of future of work come together, exchange ideas, discuss novel perspectives and approaches and create collaborations that will allow them to capitalize on each other's work.

This minitrack focuses on the impact of AI on the various aspects of the workplace as it currently exists as well as its evolution in the future. It highlights research that may influence the future of work and act as a springboard for new ideas and innovations in AI that will be disruptive to the workplace.

Specifically, the "AI and the Future of Work" minitrack focuses on:

1. Power shifts between humans and AI

2. AI and employees' mental and physical wellbeing

3. Shift in social/role identities with the introduction of AI

4. Required skill set for human employees in an era of AI

5. AI and the changing face of leadership

6. Social relationships and AI at the workplace

7. Integration of AI and work practices (knowledge sharing, decision making, etc.)

8. Ethical considerations of AI at the workplace

9. Financial and economic implications of AI implementation in the workplace

10. The changing meaning of work or work-life balance in an era of AI

11. AI task appropriateness

12. Designing AI for the workplace

13. AI and changes in work settings

14. Workplace Analytics and AI

15. AI and creativity in the workplace

This is the first year, this minitrack is being offered and we have received 15 excellent papers. The following eight papers were accepted and are featured in our minitrack.

1. *Integration of Artificial Intelligence into Recruiting Young Undergraduates: the Perceptions of 20–23-Year-Old Students* by Sara Hekkala and Riitta Hekkala who present a framework for integration of AI into recruiting.

2. *Automation and Artificial Intelligence in Software Engineering: Experiences, Challenges, and Opportunities* by Milan Latinovic and Viktoria

HICSS

Pammer-Schindler who explore how automation and AI impact software engineering practice.

3. *Recorded Work Meetings and Algorithmic Tools: Anticipated Boundary Turbulence* by Peter Cardon, Haibing Ma, A. Carolin Fleischmann, and Jolanta Aritz. In this paper, the authors identify key tensions that should be addressed in organizational policymaking about data use from recorded work meetings.

4. *To Use or Not to Use Artificial Intelligence? A Framework for the Ideation and Evaluation of Problems to Be Solved with Artificial Intelligence* by Timo Sturm, Mariska Fecho and Peter Buxmann who synthesize emerged procedural artifacts and key factors to propose a framework for problem finding in AI solver contexts.

5. *Design Foundations for AI Assisted Decision Making: A Self Determination Theory Approach* by Triparna de Vreede, Mukhunth Raghavan and Gert-Jan de Vreede who employ Social Determination Theory to examine the effect of the three motivational needs on user interaction outcome variables of a decision-making chatbot.

6. *Human Decision Making in AI Augmented Systems: Evidence from the Initial Coin Offering Market* by Saunak Basu, Aravinda Garimella, Wencui Han, and Alan Dennis who investigate if human decisions are influenced by AI agents in high uncertainty environments, such as evaluating ICO projects and under what situations are humans able to mitigate AI agents-induced errors.

7. *An Empirical Study Exploring Difference in Trust of Perceived Human and Intelligent System Partners* by Joel Elson, Douglas Derrick and Luis Merino. This paper explores the role of perceived humanness and its impact on trust in the context of decision-making with intelligent systems.

8. *Automation of Routine Work: A Case Study of Employees' Experiences of Work Meaningfulness* by Anne Staaby, Kjeld Hansen and Tor-Morten Grønli. In this paper, the authors investigate how employees, who have had their routine work automated by RPA, have experienced its influence on their work and its meaningfulness.

We thank the authors for submitting their articles to our mini-track and for contributing to the discussions and advancement of AI and the future of work.

[1] Bothun, D., M. Liebermann, and A. Rao, Bot.Me: A revolutionary partnership. How AI is pushing man and machine closer together., in Consumer Intelligence Series PwC. 2017.

[2] World Economics Forum, The Future of Jobs Report 2018, World Economic Forum Geneva.